

JOSEPH A. ROBBINS.

Improvement in Galvanic Battery.

No. 120,327.

Patented Oct. 24, 1871.

Fig. 1.

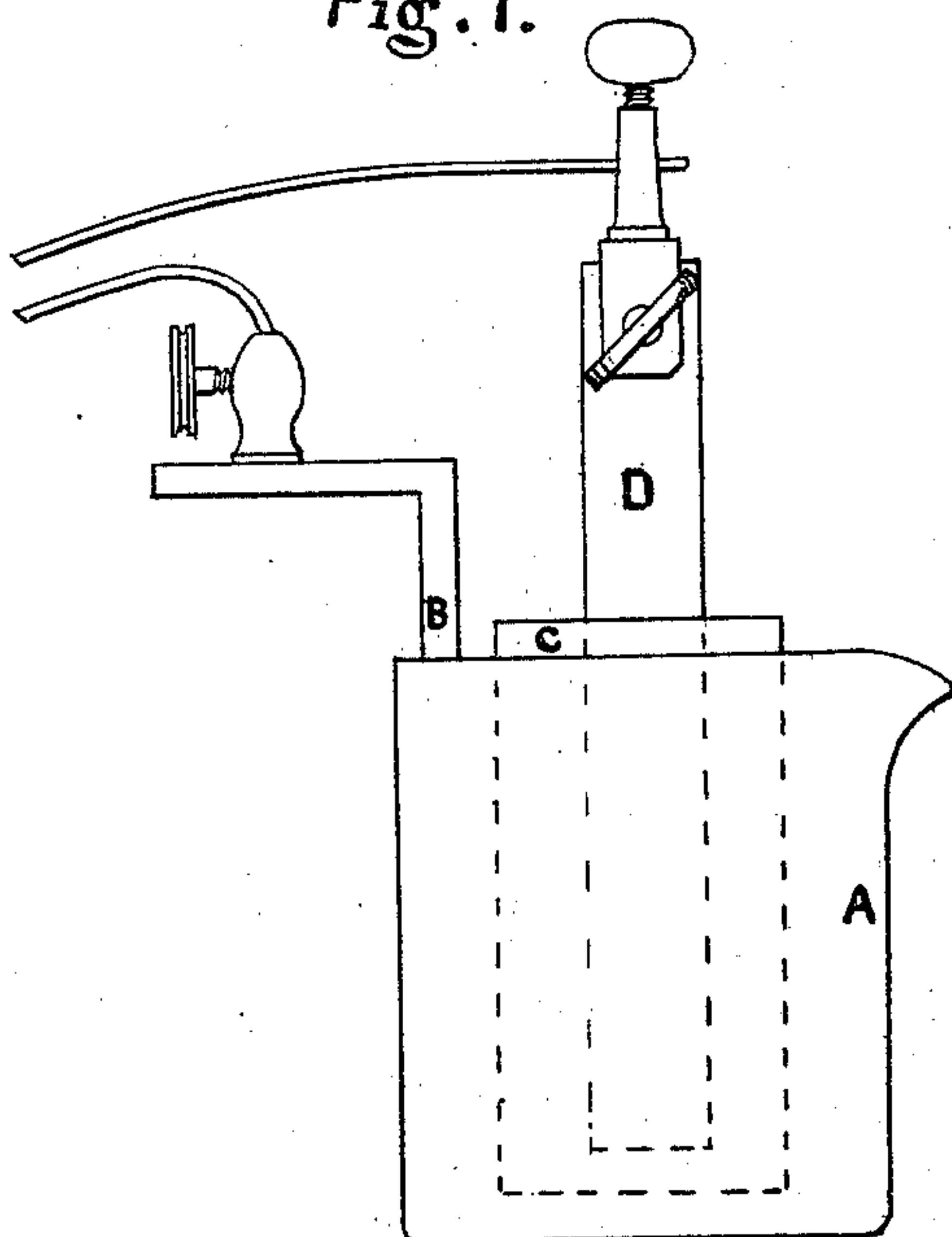
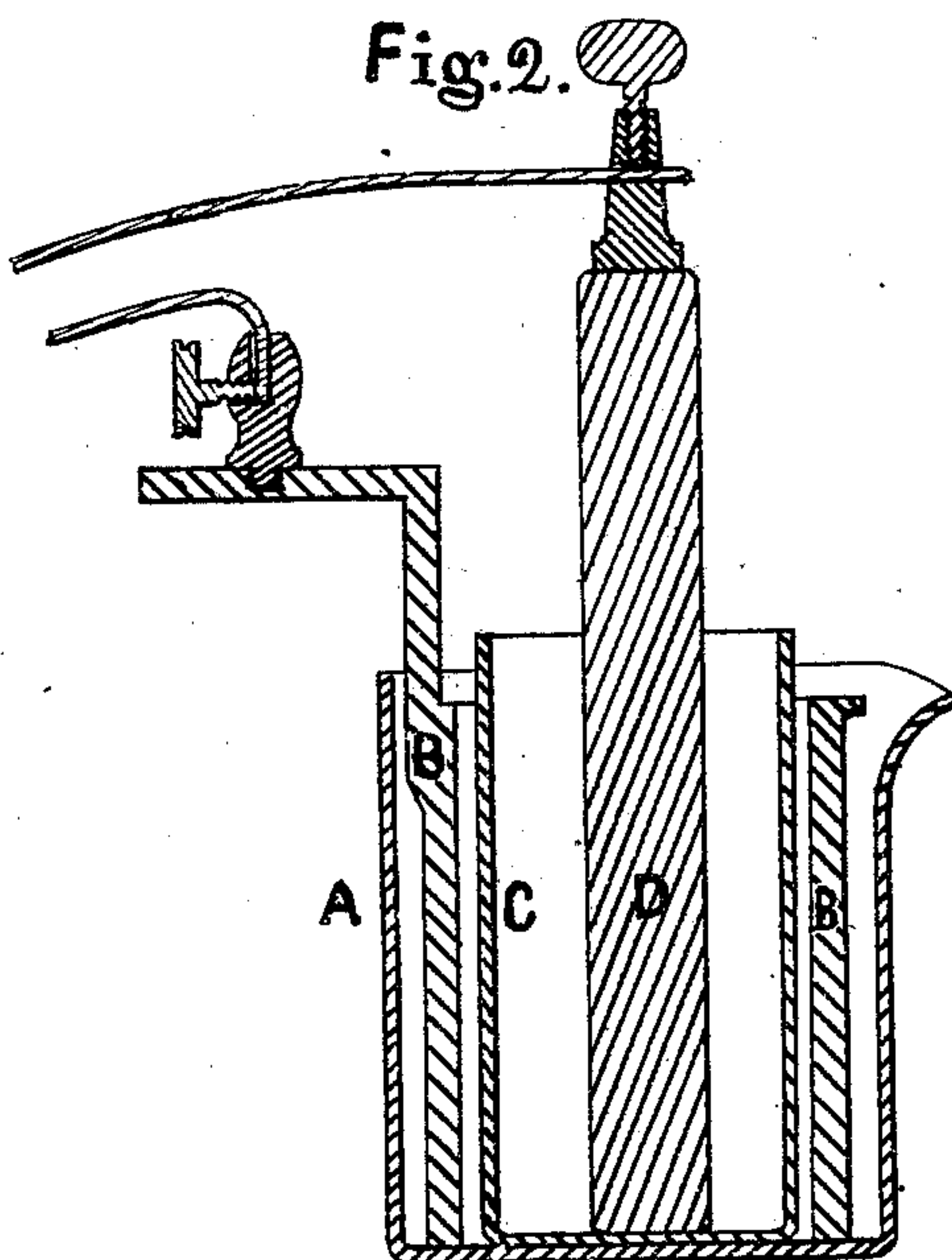


Fig. 2.



WITNESSES:

*Sylvanus Walker*  
*C. E. Ingalls.*

INVENTOR:

*Joseph A. Robbins*

# UNITED STATES PATENT OFFICE.

JOSEPH A. ROBBINS, OF MEDFORD, MASSACHUSETTS.

## IMPROVEMENT IN GALVANIC BATTERIES.

Specification forming part of Letters Patent No. 120,327, dated October 24, 1871.

*To all whom it may concern:*

Be it known that I, JOSEPH A. ROBBINS, of Medford, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Voltaic Batteries, of which the following is a specification:

My invention relates to the construction of a voltaic battery, the base of which is tin, which may be made either solid or coated upon some other metal; or tin may be combined with any other metal, it being the base.

Figure 1 is a plan side view of a battery embodying my invention. Fig. 2 is a longitudinal transverse vertical section of the same.

A is the outer vessel or cell, which may be made of stone-ware, glass, or gutta-percha. B is a cylinder of tin, having an opening through its side, in the usual manner. This cylinder I term a "basicle." C is a porous cell of unglazed earthen-ware. D is a carbon inserted in the inner porous cell, C, which contains nitric acid. To the upper end of the carbon D is attached a copper wire by a suitable clamp in the usual manner, while to a suitable projection upon the upper end of the cylinder B is attached a copper wire, also, in the same manner. This cylinder B is composed of solid tin; or a cheaper one may be made of cast-iron and then coated with

tin; or any other metal can be substituted in place of the iron; or tin may be combined with any other metal, it being the base. This cylinder D is placed in the outer vessel A, into which is placed dilute sulphuric acid, in the usual manner.

By constructing the basicle or cylinder D of tin, as above described, instead of zinc, as heretofore, I produce two positive currents without any consumption of metal, the acids only being consumed, thereby rendering a great saving in generating currents of electricity. Tin, being non-corrosive in connection with the acid in which it is placed, would not require cleaning. No mercury being required for an amalgamator, as in the case of zinc being used, it would be less injurious to the system of persons whose occupation requires the use of a galvanic battery.

What I claim is—

The employment or use of the tin basicle or cylinder B in a galvanic battery, when constructed substantially in the manner as and for the purposes hereinbefore set forth.

JOSEPH A. ROBBINS.

Witnesses:

SYLVENUS WALKER,  
C. E. INGALLS.

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